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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,000	06/27/2003	Naohiko Oyasato	239611US2SRD	5121
22850 7590 04/12/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SUN, XIUQIN	
			ART UNIT	PAPER NUMBER
			2863	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/607,000

Applicant(s)

OYASATO ET AL

Examiner

Xiuqin Sun

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-15 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 16-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,5,6,11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 3,4,7-10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 12/5/06, 8/4/06, 2/7/05, 9/24/03.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 03/12/2007.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Election/Restrictions

1. Per Applicants' response dated 01/24/2007, a provisional election with traverse of claims 2-15 in Species II is acknowledged. Claims 1 and 16-38 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Applicant's arguments about the traversal are noted by the examiner. However, the examiner's position is that: where there is no disclosure of relationship between species (see MPEP 806.04(b)), they are independent inventions and election of one invention following a requirement for restriction is mandatory even though application disagrees with the examiner. There must be a patentable difference between the species as claimed. See MPEP 806.04(h). Since the claims are directed to independent inventions, restriction is proper and made final pursuant to 35 U.S.C. 121, and it is not necessary to show a separate status in the art or separate classification (MPEP 808.01(a)).

Claim Objection

2. Claims 4, 7-10, 13, is objected to because of the following informalities:

Claim 4, lines 4-5, please change "CAD (computer aided design)" into – Computer Aided Design (CAD) --.

Claim 7, last paragraph, please change "CAD" into – Computer Aided Design (CAD) --.

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Claim 10, last paragraph, please change "CAD" into -- Computer Aided Design (CAD) --.

Claim 13, line 3, please change "CAD" into -- Computer Aided Design (CAD) --.

Claim 13, line 2, recites the limitation "the updated parts/material data". There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5, 6, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakihana et al. (U.S. Pub. No. 20020099587) in view of Matsuyama et al. (JP 2001116662 A, machine translation of English).

Regarding claim 2, Kakihana et al. teach a design support apparatus which supports a design of a product (Abstract), the apparatus comprising: a data generator which generates parts/material data including parts composing the product, kinds of materials composing the parts and mass of each of the materials that differ in kind (sections 0037, 0075 and 0081); a setting unit configured to set an evaluation condition

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(section 0082); an evaluation unit configured to evaluate a recyclability of the product, using the evaluation condition and the parts/material data (sections 0081-0083).

Kakihana et al. do not mention expressly: an analysis unit configured to analyze a factor obstructing the recyclability based on an evaluation result of the evaluating unit; and an output unit configured to output a remedy for an obstruction factor provided as an analysis result of the analysis unit.

Matsuyama et al. teach a recyclability evaluation device for product (Abstract), including: an analysis unit configured to analyze a factor obstructing the recyclability based on an evaluation result of the recyclability of a product (section 0004); and an output unit configured to output a remedy for an obstruction factor provided as an analysis result of the analysis unit (sections 0031-0035).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Matsuyama et al. in the invention of Kakihana et al. in order to provide an accurate and effective mechanism of evaluating the recycling capability of a product to better support product design (Kakihana et al., section 0010).

Regarding claim 11, Kakihana et al. teach a method for supporting a design of a product (Abstract) comprising: evaluating a recyclability of the product based on parts/material data including parts composing a product, kinds of materials composing the parts and mass of each of the materials that differ in kind (sections 0037, 0075 and 0081-0083).

Kakihana et al. do not mention expressly: analyzing an obstruction factor of the recyclability of the product based on an evaluation result of the recyclability; and displaying a remedy for the obstruction factor according to an analysis result.

Matsuyama et al. teach a recyclability evaluation device for product (Abstract), including: analyzing an obstruction factor of the recyclability of the product based on an evaluation result of the recyclability (section 0004); and displaying a remedy for the obstruction factor according to an analysis result (sections 0031-0035).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Matsuyama et al. in the invention of Kakihana et al. in order to provide an accurate and effective mechanism of evaluating the recycling capability of a product to better support product design (Kakihana et al., section 0010).

Regarding claims 5, 6, 14 and 15, Kakihana et al. teach the apparatus including the subject matter discussed above except: wherein the output unit comprises a display unit configured to display at least one part and material having high recyclability than the parts and the materials and used as a substitute for the parts and the materials corresponding to the obstruction factor; and wherein the output unit comprises a display unit configured to display a demountable portion of the parts and materials corresponding to the obstruction factor as a recyclability remedy.

The teaching of Matsuyama et al. includes: the output unit comprises a display unit configured to display at least one part and material having high recyclability than the parts and the materials and used as a substitute for the parts and the materials

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corresponding to the obstruction factor (sections 0031-0035); and the output unit comprises a display unit configured to display a demountable portion of the parts and materials corresponding to the obstruction factor as a recyclability remedy (sections 0031-0035).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Matsuyama et al. in the invention of Kakihana et al. in order to provide an accurate and effective mechanism of evaluating the recycling capability of a product to better support product design (Kakihana et al., section 0010).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakihana et al. in view of Matsuyama et al., as applied to claim 11 above, and further in view of Sakai et al. (U.S. Pat. No. 6477438).

Regarding claim 13, Kakihana et al. in view of Matsuyama et al. teach the method including the subject matter discussed above except: converting the updated parts/material data to CAD data including names of parts composing the product, a quantity of the parts and the number of the parts.

Sakai et al. teach a design support apparatus, including: converting requested parts/material data to CAD data including names of parts composing the product, a quantity of the parts and the number of the parts (cols. 21-22, lines 28-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Sakai et al. in the combination of Kakihana et al. and Matsuyama et al., in order to apply the recyclability evaluation and

analysis method taught by Kakihana et al. and Matsuyama et al. to support a CAD system for designing a component (Sakai et al., Abstract).

Allowable Subject Matter

6. Claims 3 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and overcome the objection set forth above in section 2 of this Office action.

8. Claims 7-10 would be allowable if rewritten to overcome the objection set forth above in section 1 of this Office action.

Reasons for Allowance

9. The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for the allowance of claims 3 and 4 is the inclusion of the limitation of an update unit configured to update, based on the remedy outputted, the evaluation condition and the parts/material data which are used in the evaluation by the evaluation unit, and wherein the evaluation unit is configured to evaluate a recyclability of the product based on the updated evaluation condition and the updated

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parts/material data, and the output unit is configured to output an updated evaluation result of the evaluation unit. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 7-9 is the inclusion of the limitations of an update unit configured to update the evaluation condition and the parts/material data used in the evaluation by the evaluation unit, using the remedy displayed on the first display unit; and a second evaluation unit configured to evaluate the environment load based on updated evaluation condition and parts/material data obtained by the update unit. It is this limitation found in each of the claims, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

The primary reason for the allowance of claim 10 is the inclusion of the limitations of an update unit configured to update the evaluation condition and the parts/material data used in the evaluation by the evaluation unit, based on the remedy displayed on the first display unit; and a second evaluating unit configured to evaluate the recyclability of the product and the environment load, using updated evaluation condition and parts/material data which are obtained by the update unit; a second displaying unit configured to display an evaluation result of the second evaluating unit. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.


The primary reason for the allowance of claim 12 is the inclusion of the limitation of updating evaluation condition and the parts/material data used in the evaluation according to the remedy displayed, and displaying the evaluation result of the recyclability based on updated evaluation condition and parts/material data. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

XS 
March 31, 2007

BRYAN BUI
PRIMARY EXAMINER

